

2.4 WRITING EQUATIONS OF LINES GIVEN TWO POINTS

Ex 1 PASSES THROUGH $(8, 5)$ & $(11, 14)$

$$m = \frac{14-5}{11-8} = \frac{9}{3} = 3$$

① FIND SLOPE

$$y = 3x + b$$

② FIND Y-INTERCEPT

$$5 = 3(8) + b$$

$$\begin{array}{r} 5 = 24 + b \\ -24 \quad -24 \\ \hline \end{array}$$

$$-19 = b$$

$$\boxed{y = 3x - 19}$$

Ex 2 PASSES THROUGH $(-8, 8)$ & $(0, 1)$

$$m = \frac{1-8}{0-(-8)} = \frac{-7}{8}$$

$$y = -\frac{7}{8}x + b$$

$$1 = -\frac{7}{8}(0) + b$$

$$1 = b$$

$$\boxed{y = -\frac{7}{8}x + 1}$$

Ex 3 PASSES THROUGH $(-20, -10)$ & $(5, 15)$

$$m = \frac{15-(-10)}{5-(-20)} = \frac{25}{25} = 1$$

$$y = x + b$$

$$15 = 5 + b$$

$$\begin{array}{r} 15 = 5 + b \\ -5 \quad -5 \\ \hline \end{array}$$

$$10 = b$$

$$\boxed{y = x + 10}$$

HOMEWORK: 2.4 WORKSHEET PRACTICE C #1-18